

Chester invention. It follows that the third claim of the Chester patent should be limited to the devices, or their equivalents, set forth in that claim, and these are not found in the defendant's structure.

Bill dismissed, with costs.

ATWOOD *et al.* v. W. G. & A. R. MORRISON CO.

(Circuit Court, D. Connecticut. September 30, 1892.)

PATENTS FOR INVENTIONS—ANTICIPATION—INFRINGEMENT—APPARATUS FOR DRIVING SPINDLES.

Letters patent No. 296,377, issued April 8, 1884, to John E. and Eugene Atwood for an improvement in the means of driving spindles by bands, so as to permit the use of narrow spindle frames, consist of the combination of a drive pulley and a guide pulley having parallel axes, and arranged one above the other, two spindles on opposite sides of said pulleys, and two driving bands, each encircling both pulleys and the whirl of the spindle, and each consisting of three parts, two of which pass horizontally between the whirl and the adjacent sides of the pulley, and the third passing directly from one pulley to the other between the horizontal portions. *Held*, that the patent was not anticipated by a machine alleged to have been constructed and used continuously from 1877 by the W. G. & A. R. Morrison Company in its factory at Willimantic, Conn.

In Equity. Bill by John E. Atwood and Eugene Atwood against the W. G. & A. R. Morrison Company for infringement of patent. Decree for injunction and accounting.

Fish, Richardson & Storrow, for plaintiffs.

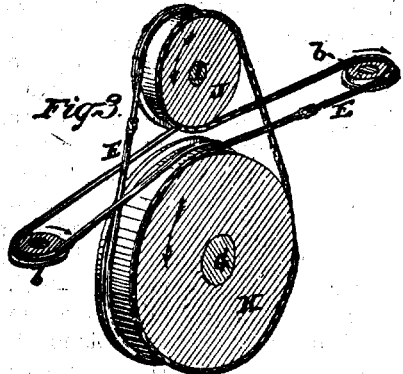
Charles L. Burdett, for defendant.

SHIPMAN, Circuit Judge. This is a bill in equity, which is based upon the infringement of the first three claims of letters patent No. 296,377, dated April 8, 1884, to John E. Atwood and Eugene Atwood for an improvement in the means for driving spindles by driving bands. The application was filed July 19, 1879. A spinning frame is a long frame having at each side a row of spindles rotating in vertical axes. A single shaft, extending lengthwise of the frame, drives all the spindles of the frame. This shaft was formerly provided with a drum, or with single separate pulleys, one for each spindle. In the Atwood patent of 1874 two driving drums were used, which were "arranged side by side, lengthwise of the frame, each driving, by separate bands, the row of spindles at the further side of the frame. In this arrangement the drum on the side next one row of spindles acts as a guide for the bands running from said spindles to the drum at the other side, which drives them, and in this manner the portions of the band approaching and leaving the whirl of the spindle are in the plane of rotation of the whirl," which is an important consideration, because, if, as in preceding inventions, the band approached and left the whirl at an angle to its plane of rotation, unnecessary friction was increased. The two drums placed side by side made a wide frame, and the same fault existed in the earlier inventions, which had also wide frames, because the spindle must be at a distance from the drum, so as

to make the angle between the parts of the band from the drum to the whirl sufficiently acute. The spinning room often contains thousands of spindles, and narrow frames are very important to save floor space and material. To accomplish this beneficial result, and also to increase the length of the band, thereby increasing its durability, the invention of the patent was conceived. The inventors say in the specifications:

"An important object of our invention is to provide, in an extremely narrow spinning frame, having a row of spindles on each side, for driving each spindle with a separate and independent driving band, which shall have sufficient length to give it durability, and all parts of which shall be free from liability to rub and chafe against each other while running. To this end the invention consists in the combination of a driving pulley and a guide pulley having parallel axes, and arranged one over the other, a spindle arranged at one side of said pulleys, with its whirl in a horizontal plane about midway between said pulleys, and a driving band encircling both of said pulley and said whirl, and comprising two portions extending horizontally between the whirl and adjacent sides of the two pulleys, and a portion extending directly from one pulley to the other, and passing between the said horizontal portions, as more fully hereinafter described. The invention also consists in the combination, with the two pulleys arranged as above described, of two spindles, arranged on opposite sides of the two pulleys, with their whirls in a horizontal plane about midway vertically between said pulleys, and two driving bands, each encircling both said pulleys and the whirl of a spindle, and each extending as above described. The invention also consists in providing the guide pulleys above described with flanges, whereby the portion of each driving band which passes from one pulley directly to the other is prevented from rubbing and chafing against the two horizontal portions between which it passes, as more fully hereinafter described."

In the patented device, the driving shaft, which carries the driving pulleys,—one for two opposite whirls,—occupies the usual position between the two rows of spindles. Above the shaft, and parallel with it, is another shaft for carrying the guide pulleys, which are directly over and which correspond with each of the driving pulleys, and are directly between the opposite spindles on the two sides of the frame, and are flanged on each side. The whirl of the spindle is about opposite the space between the two pulleys. The band encircles the driving and guide pulleys and the whirl of a spindle, and after leaving the driving pulley, and before passing around the guide pulley, passes around and from the whirl in a nearly horizontal plane, while the portion which passes from the guide pulley to the driving pulley passes between the horizontal portions in a nearly vertical plane. Chafing between the vertical and the horizontal portions of the band is prevented by the fact that the space between the flanges of the guide pulley is less than the diameter of the whirl, and therefore the flanges cause the vertical portions to swerve



from the lines in which they would come in contact with the horizontal portions.

The three claims which are said to have been infringed are as follows:

"(1) The combination of a driving pulley and a guide pulley having parallel axes, and arranged one over the other, a spindle arranged at one side of said pulleys, having its whirl in a horizontal plane about midway vertically between said pulleys, and a driving band encircling both of said pulleys and said whirl, and comprising two portions extending directly from one pulley to the other, and passing between the said horizontal portions, substantially as described.

"(2) The combination of a driving pulley and a guide pulley having parallel axes, and arranged one over the other, two spindles arranged on opposite sides of said pulleys, with their whirls in a horizontal plane about midway vertically between said pulleys, and two driving bands, each encircling both of said pulleys and the whirl of a spindle, and each comprising two portions extending horizontally between the whirl around which it passes and the adjacent sides of said pulleys, and a portion extending directly from one pulley to the other, and passing between said two horizontal portions, substantially as herein described.

"(3) The combination of a driving pulley, H, and the flanged guide pulley, J, and their shafts, arranged parallel with each other, the spindle, D, and its whirl, b, arranged as described, and the driving band, E, encircling both of said pulleys and said whirl, and comprising the horizontally extending portions, SS, and the portion, S', passing between the portions, SS, substantially as herein described."

The single driving pulley and the guide pulley directly over it made a narrow frame, while the band approaches the whirl, as in the 1874 patent, in its plane of rotation. The result which was previously accomplished by two drums side by side is attained by two pulleys, one above the other, in the same vertical plane, with an economy of room. A long, and therefore durable, band is also gained.

The defense is that the defendant constructed and used in the summer of 1877, and continuously thereafter, in its factory in Willimantic, Conn., a testing machine for spindles, which was "banded," in accordance with the patented method, by two pulleys, one above the other. The history of this machine, as given by the defendant's vice president and secretary, is that in 1877 a testing machine was made, for the purpose of testing spindles which were being put into machines made for the Springfield Silk Company; that it was kept and used until about 1880 in the attic of the defendant's shop. An addition to the factory was then built, and the machine was placed in the third story, where it remained for some months, and was then moved down stairs to the first floor. It had two wooden pulleys of about the same size, until 1883 or 1884, when a smaller iron flanged pulley was substituted for the upper wooden pulley, and a groove upon the lower pulley was turned off, but it is said by the defendant that the same method of banding was used continuously from 1877. The Springfield machines were banded in the old "two-cylinder" method. The patented method of banding is ingenious; and speedily attracted attention when brought before the public. It is remarkable that the defendant hit upon this method in

1877, in a crude machine merely for testing spindles, when the spindles to be tested were banded in the old-fashioned way, and a new system was not needed. It is furthermore remarkable that in a small shop the attention of the mechanics should not have been attracted to a new method, which, when presented to other manufacturers, quickly excited interest. That an invention which bore marks of intelligent ingenuity, whose claims to superiority were promptly acknowledged by the public, should have been produced in 1877, and should have been continuously used till Atwood's invention became known, without the consciousness of any one that this testing machine contained a novelty, is singular. Six witnesses who were actually engaged in 1877 in the defendant's shop—one as a partner, one as a foreman, two as machinists, and two as wood workmen—testify as follows: They did not see the machine in the attic. They, or some of them, did see it on the third floor in 1889, where it was used for testing spindles. The Atwood method of banding was a novelty to them when it was introduced. Two of them, one the foreman, say that when it was in the third story it had two horizontal cylinders side by side, and was not banded in the new way. The foreman says that when it was removed to the basement "the thing [was] set up on end," the upper cylinder was removed, the iron band wheel was substituted for it, and the present style of "banding" was introduced.

My examination of the testimony brings me to the conclusion that a testing machine was built in 1877, was placed in the dimly-lighted garret of the shop, was used for testing the Springfield Company's new spindles, and was removed to the third floor in 1880, where it was in plain sight, and was noticed by the workmen, but that its two cylinders moved in a horizontal plane, and were side by side, and its banding was the "two-cylinder method," and the one which was then needed for testing purposes; that subsequently, when the Atwood method became public, the change was made in the upper cylinder, and the position of the machine was changed. The fact of these changes in the life of the machine may easily have escaped the memory of the officers of the defendant company, who now believe that the machine in its important features has existed since 1877; but the fact that they are mistaken is far more probable than that the Atwood banding was produced by one of them in that year.

There is no suggestion that other pre-existing devices trespassed upon the right of the invention to the claims of the patent, but it is claimed in the argument that infringement was not proved. In the *prima facie* testimony the complainants introduced a model, which respondent's counsel admitted, for the purposes of the case, was a "correct illustrative representation of machines for spinning silk, which respondent made and sold at Willimantic, Conn., between the date of the patent in suit and the time of filing the bill of complaint." This model was "banded" by the Atwood patented method. Complainants' witnesses thereupon testified that the machine illustrated by the model was an infringement. Respondent's witnesses did not deny the infringement, or deny that its machines, when sold, were banded. It is now said that

the stipulation admitted the construction of the spinning frames, but did not admit that they had sold machines with bands, and that such a machine can be banded in different ways, and that there is no evidence that the complainants had banded their machines in any way. Without discussing the effect of the defendant's silence after the testimony of the complainants, which was based upon the supposed extent of the stipulation, I think that the respondent positively admitted the fact of making and selling machines with the Atwood mode of banding. Mr. W. G. Morrison, the defendant's vice president, in reply to cross question 96, "When did you first employ such a way of banding [in the 1877 frame] in the frames which your company sent out from its shop?" and to question 97, to give the date as nearly as he could recollect, said, "Between 1881 and 1884." In reply to cross question 127, which inquired whether the end of 1884 or the beginning of 1885 was the time when he first produced spinning frames with the method of banding shown in the exhibit, Mr. Morrison said: "Some time prior to this date, I made a trial frame containing a continuous tin cylinder. I had never made any frames, and sent out prior to this date." He certainly implied that after that date he had sent out frames with the method of banding shown in the model. This testimony leaves no room for reasonable uncertainty upon the question of infringement. Let there be an injunction against infringement of the 1st, 2d, and 3d claims, and for an accounting.

THE CHATFIELD.

SHELDRAKE *v.* THE CHATFIELD.

OCEAN S. S. Co. *v.* SAME.

(District Court, E. D. Virginia. March 14, 1892.)

SALVAGE—TOWAGE—STEAMSHIP WITH BROKEN SHAFT.

On the night of the 26th of October, 1891, the steamship Chatfield, of 1,904 tons register, and loaded with 7,400 bales of cotton, when about 53 miles out from Cape Henry, broke her shaft and lost her propeller. A strong wind was blowing at the time, which increased during the next day to a gale. There is also a strong current in that part of the ocean, setting south, and the Chatfield was carried to a point some 70 miles from Cape Henry, and off soundings. On the following morning she set signals of distress, and about 11 o'clock was approached by the cargo steamship Brixham, of 400 tons net register, and loaded deep with iron, which with great difficulty got hawsers to her, and in 9 hours towage against the wind, her hawser parting 3 times, brought her within 43 miles of Cape Henry, and into 16 or 17 fathoms of water, where the Chatfield anchored. The Brixham remained with her all night, and in the morning, the gale increasing, the Chatfield signaled the Brixham to go to port for additional help, with which request the Brixham complied. Thereafter the passenger steamship City of Augusta came up, to which the Chatfield exhibited signals of distress; she at this time dragging her anchor and drifting towards the coast. The City of Augusta, with great difficulty, and danger of fouling her propeller and disabling herself, got hawsers to the Chatfield, and towed her into Hampton Roads; the service lasting about 12 hours. The Chatfield, with her cargo and freight, was worth about \$435,000, the Brixham